

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:
  - (a) determining a pack type of the current pack;
  - (b) updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space, where the updating comprises:
    - incrementing a current pack counter;
    - computing a next ASV memory write address based upon the incremented pack counter; and
    - determining a next pack type based upon the current pack type; and
  - (c) concurrently with the updating, storing a current payload associated with the current pack to the available memory location.
2. (original) The method as recited in claim 1, further comprising:  
when the current pack is not a last pack in the bitstream, then  
repeating (a)-(c) for a next pack in the bitstream.
3. (currently amended) ~~A~~ The method as recited in claim 1, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm\_end pack.
4. (canceled).
5. (currently amended) The method as recited in claim 4 1, wherein the determining a next pack type comprises:
  - if the current pack type is the pgm\_end pack type, then
  - updating an ASV counter; and
  - updating a highlight pack buffer counter.

6. (currently amended) The method as recited in claim 4 1, wherein the determining a next pack type comprises:

if the current pack type is the highlight pack type, then  
updating a subpicture buffer; and  
updating a video buffer.

7. (currently amended) The method as recited in claim 4 1, wherein the determining a next pack type comprises:

if the current pack type is the subpicture pack type, then  
updating a video buffer counter.

8. (original) The method as recited in claim 1, where in the ASV memory buffer is a SDRAM memory.

9. (original) The method as recited in claim 1, wherein the ASV buffer is included in a universal DVD-A/V player unit.

10. (original) The method as recited in claim 9, further comprising:

(v) defining an ASV frame;  
(x) retrieving the ASV frame; and  
(y) displaying the ASV frame on a display coupled to the DVD-A/V player unit.

11. (currently amended) A method as recited in claim 10, of dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, wherein the ASV buffer is included in a universal DVD-A/V player unit, the method comprising:

determining a pack type of the current pack;  
updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;  
concurrently with the updating, storing a current payload associated with the current pack to the available memory location;  
defining an ASV frame;  
retrieving the ASV frame; and

displaying the ASV frame on a display coupled to the DVD-A/V player unit;

wherein the defining comprises:

locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame;

locating an ASV frame pgm\_end pack, wherein the ASV frame pgm\_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.

12. (currently amended) ~~A~~ The method as recited in claim 11, wherein the locating an ASV frame highlight pack is based upon a first highlight pack pointer stored in the ASV table.

13. (currently amended) ~~A~~ The method as recited in claim ~~12~~ 11, wherein the locating an ASV frame pgm\_end pack is based upon a first pgm\_end pack pointer stored in the ASV table.

14. (original) A method of dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:

- (a) determining a pack type of the current pack;
- (b) updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;
- (c) concurrently with the updating, storing a current payload associated with the current pack to the available memory location;
- (d) incrementing a pack counter;
- (e) computing a next ASV memory write address based upon the incremented pack counter;
- (f) determining a next pack type based upon the current pack type; and
- (g) repeating (a)-(f) for a next pack in the bitstream when the current pack is not a last pack in the bitstream.

15. (currently amended) The method as recited in claim 14, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm\_end pack.

16. (original) The method as recited in claim 15, wherein the determining a next pack type comprises:
- if the current pack type is the pgm-end pack type, then
  - updating an ASV counter;
  - updating a highlight pack buffer counter;
  - if the current pack type is the highlight pack type, then
  - updating a subpicture buffer;
  - updating a video buffer; and
  - if the current pack type is the subpicture pack type, then
  - updating a video buffer counter.
17. (original) The method as recited in claim 14, where in the ASV memory buffer is a SDRAM memory.
18. (original) The method as recited in claim 14, wherein the ASV buffer is included in a universal DVD-A/V player unit.
19. (original) The method as recited in claim 18, further comprising:
- defining an ASV frame;
  - retrieving the ASV frame; and
  - displaying the ASV frame on a display coupled to the DVD-A/V player unit.
20. (currently amended) ~~A~~ The method as recited in claim 19, wherein the defining comprises:
- locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame;
  - locating an ASV frame pgm~end pack, wherein the ASV frame pgm\_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.

21. (currently amended) ~~A~~ The method as recited in claim 20, wherein the locating an ASV frame highlight pack is based upon a first highlight pack pointer stored in the ASV table.
22. (currently amended) ~~A~~ The method as recited in claim 21, wherein the locating an ASV frame pgm\_end pack is based upon a first pgm\_end pack pointer stored in the ASV table.
23. (original) An apparatus for dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:  
a means for determining a pack type of the current pack;  
a means for updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;  
a means for concurrently with the updating, storing a current payload associated with the current pack to the available memory location;  
a means for incrementing a pack counter;  
a means for computing a next ASV memory write address based upon the incremented pack counter;  
a means for determining a next pack type based upon the current pack type.
24. (original) The apparatus as recited in claim 23, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm\_end pack.
25. (original) The apparatus as recited in claim 24, further comprising:  
a means for updating an ASV counter;  
a means for updating a highlight pack buffer counter;  
a means for updating a subpicture buffer;  
a means for updating a video buffer; and  
a means for updating a video buffer counter.
26. (original) The apparatus as recited in claim 23, wherein the ASV buffer is included in a universal DVD-A/V player unit.
27. (original) The apparatus as recited in claim 26, further comprising:  
a means for defining an ASV frame;

a means for retrieving the ASV frame; and  
a means for displaying the ASV frame on a display coupled to the DVD-A/V player unit.

28. (original) The apparatus as recited in claim 27, wherein the defining comprises:  
a means for locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame;  
a means for locating an ASV frame pgm\_end pack, wherein the ASV frame pgm\_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.

29. (currently amended) A computer ~~program-product~~ system for dynamically allocating available audio still video (ASV) buffer memory space in an ASV buffer for a current pack in a DVD audio bitstream, comprising:

a computer;

a computer program executing on the computer, wherein the computer program comprises computer instructions for:

~~computer code for determining a pack type of the current pack;~~

~~computer code for updating an ASV table with a pointer corresponding to an available memory location in the ASV buffer memory space;~~

~~computer code for concurrently with the updating, storing a current payload associated with the current pack to the available memory location;~~

~~computer code for incrementing a pack counter;~~

~~computer code for computing a next ASV memory write address based upon the incremented pack counter; and~~

~~computer code for determining a next pack type based upon the current pack type; and  
a computer readable medium for storing the computer program product.~~

30. (currently amended) The computer ~~program-product~~ system as recited in claim 29, wherein the pack type is selected from a group comprising: a highlight pack, a subpicture pack, a video pack, and a pgm\_end pack.

31. (currently amended) The computer ~~program product~~ system as recited in claim 30, wherein the computer program further comprising comprises computer instructions for:

- ~~computer code for updating an ASV counter;~~
- ~~computer code for updating a highlight pack buffer counter;~~
- ~~computer code for updating a subpicture buffer;~~
- ~~computer code for updating a video buffer; and~~
- ~~computer code for updating a video buffer counter.~~

32. (currently amended) The computer ~~program product~~ system as recited in claim 29, where in the ASV memory buffer is a SDRAM memory.

33. (currently amended) The computer ~~program product~~ system as recited in claim 29, wherein the ASV buffer is included in a universal DVD-A/V player unit.

34. (currently amended) The computer ~~program product~~ system as recited in claim 33, wherein the computer program further comprising comprises computer instructions for:

- ~~computer code for defining an ASV frame;~~
- ~~computer code for retrieving the ASV frame; and~~
- ~~computer code for displaying the ASV frame on a display coupled to the DVD-A/V player unit.~~

35. (currently amended) ~~A~~ The computer ~~program product~~ system as recited in claim 34, wherein the computer program further comprising comprises computer instructions for:

- ~~computer code for locating an ASV frame highlight pack, wherein the ASV frame highlight pack corresponds to a first memory space address in the ASV buffer corresponding to the ASV frame; and~~
- ~~computer code for locating an ASV frame pgm\_end pack, wherein the ASV frame pgm\_end pack corresponds to a second memory space address in the ASV buffer corresponding to the ASV frame, wherein the first and the second memory space addresses define a portion of the ASV buffer memory space allocated to the ASV frame.~~